

## WHAT IS CLAIMED IS:

1. A probe module electrically coupled to a terminal of a device under test for sending and/or receiving a signal to and/or from said device under test, comprising:

a first substrate;

a probe pin provided on said first substrate to be in contact with said terminal of said device under test;

a first signal transmission pattern formed on said first substrate, said first signal transmission pattern being electrically coupled to said probe pin, with a gap formed at said first signal transmission pattern not to transmit any electric signal; and

a first switch means for short-circuiting or open-circuiting said gap of said first signal transmission pattern.

2. A probe module as claimed in claim 1 further comprising:

a second signal transmission pattern formed on said first substrate, said second signal transmission pattern being electrically coupled to said probe pin, with a gap formed at said second signal transmission pattern not to transmit any electric signal; and

a second switch means for short-circuiting or open-circuiting said gap of said second signal transmission pattern,

wherein said probe pin is coupled to a joining point of said first and second signal transmission patterns.

3. A probe module as claimed in claim 2, wherein said first

signal transmission pattern supplies a pulse input signal to said device under test,

said second signal transmission pattern supplies a direct current input signal to said device under test, and

said first and second switch means control whether to supply said pulse input signal or direct current input signal to said device under test.

4. A probe module as claimed in claim 2, wherein said gap is arranged near said probe pin on said first substrate.

5. A probe module as claimed in claim 1, wherein said first switch means is a switch actuator, of which a first end is fixed and a second end comprises a contact to short-circuit said gap.

6. A probe module as claimed in claim 5 further comprising:  
a second substrate provided substantially parallel to said first substrate,

wherein said first end of said switch actuator is fixed to said second substrate and said second end of said switch actuator is arranged near said gap.

7. A probe module as claimed in claim 5, wherein said switch actuator comprises:

a bimorph element formed by laminating two materials of which thermal expansion coefficients are different from each other; and

a heater for heating said bimorph element,

wherein said bimorph element moves said contact to

short-circuit said gap, said bimorph element being heated by said heater.

8. A probe module as claimed in claim 7, wherein said bimorph element comprises an aluminum layer and a silicon oxide layer.

9. A probe module as claimed in claim 5, wherein said switch actuator is a piezoelectric bimorph actuator.

10. A probe module as claimed in claim 1, wherein said first signal transmission pattern is a strip line.

11. A probe module as claimed in claim 1, wherein said first signal transmission pattern is a coplanar line.

12. A probe module as claimed in claim 1, wherein said first substrate is arranged substantially perpendicular to said device under test.

13. A testing apparatus for testing a device under test, comprising:

a pattern generating unit for generating a test signal to test said device under test;

a probe module for receiving said test signal generated by said pattern generating unit, supplying said received test signal to said device under test, and receiving an output signal outputted by said device under test based on said test signal; and

a judging unit for judging quality of said device under test based on said output signal received by said probe module,

wherein said probe module comprises:

a first substrate;

a probe pin provided on said first substrate to be in contact with said terminal of said device under test;

a first signal transmission pattern formed on said first substrate, said first signal transmission pattern being electrically coupled to said probe pin, with a gap formed at said first signal transmission pattern not to transmit any electric signal; and

a switch means for short-circuiting or open-circuiting said gap of said first signal transmission pattern.